

LISTING OF THE CLAIMS

1. (Cancelled)

2. (Previously Presented) The system of claim 7, wherein the varying parameter is focus distance.

3-4. (Cancelled)

5. (Currently Amended) The system of claim [[4]] 7, wherein the user interface allows the different focus of each of the at least two images to be blended into the new image that includes an apparent focus between the two focus distances.

6. (Original) The system of claim 5, further comprising:

a lens position indicator configured to indicate the position of the lens for each of the at least two images;

a focus determination element configured to analyze each of a plurality of regions associated with each of the at least two images, the focus determination element also configured to determine whether each of the plurality of regions are in focus; and

where the image capture software assembles each of the in-focus regions into the new image.

7. (Currently Amended) A digital image capture and processing system comprising:
 - a lens coupled to a lens control element;
 - an image sensor configured to capture images from the lens;
 - a memory element and a processor coupled to the lens control element, the memory element including image capture software, where the image capture software cause the lens and the image sensor to capture at least two images, each of the at least two images captured using a varying parameter and stored as a single file, where the at least two images are combined to form a new image having at least one characteristic different from corresponding characteristics of the at least two images;
a user interface associated with the image capture software, where the user interface allows the user to combine attributes of the at least two images to form the new image, wherein the user interface further comprises a lens shift and an image plane tilt adjustment, a lens shift referring to a physical shift of the lens in a vertical direction or a horizontal direction with respect to an image plane and a plane tilt referring to a physical tilt of the lens with respect to the image plane, wherein the image capture software and the user interface are used to simulate at least one of the lens shift and plane tilt characteristics in the new image by capturing the at least two images at a plurality of focal lengths; and
a depth of field indicator assigned to each of the at least two images, where the depth of field indicator allows a user to determine a depth of field for each of the at least two images.
8. (Original) The system of claim 7, wherein the user interface includes a depth of field adjustment that allows a user to select the depth of field of the new image from the depth of field of each of the at least two images.
9. (Original) The system of claim 6, further comprising a distance indicator assigned to each of the regions, the distance indicator configured to assign a distance measurement to an alpha channel for each region.
10. (Canceled)

11. (Previously Presented) The system of claim 7, wherein a first of the at least two images is captured using conventional photography and a second of the at least two images is captured using infrared photography.

12. (Previously Presented) The system of claim 7, wherein the varying parameter comprises the number of bits used by each pixel in the image sensor.

13. (Canceled)

14. (Previously Presented) The method of claim 19, wherein the varying parameter comprises focus distance.

15-16. (Canceled)

17. (Currently Amended) The method of claim ~~16~~ 19, further comprising the step of blending each of the at least two images into the new image that includes an apparent focus between the focus distance of each of the at least two images.

18. (Original) The method of claim 17, further comprising the steps of:
indicating the position of the lens for each of the at least two images;
dividing each of the at least two images into a plurality of regions;
analyzing each of the regions to determine whether each of the plurality of regions are in focus; and
assembling each of the in-focus regions into the new image.

19. (Currently Amended) A method for operating a digital image capture and processing device, the method comprising the steps of:

- coupling a lens to a lens control element;
- coupling an image sensor to the lens;
- capturing at least two images, each of the at least two images captured using a varying parameter, where the at least two images are combined to form a new image having at least one characteristic different from corresponding characteristics of the at least two images;
- storing the at least two images as a single file;
- assigning a depth of field indicator to each of the at least two images; and
- determining a depth of field for each of the at least two images;
- providing lens shift and image plane tilt indicators, a lens shift referring to a physical shift of the lens in a vertical direction or a horizontal direction with respect to an image plane and a plane tilt referring to a physical tilt of the lens with respect to the image plane;
- simulating at least one of the lens shift and plane tilt characteristics in the new image from the at least two images captured at a plurality of focal lengths; and
- combining attributes of the at least two images to form the new image.

20. (Original) The method of claim 19, further comprising the step of using a depth of field adjustment to select the depth of field of the new image from the depth of field of each of the at least two images.

21. (Original) The method of claim 18, further comprising the step of assigning a distance indicator to each of the regions, the distance indicator configured to assign a distance measurement to an alpha channel for each region.

22. (Canceled)

23. (Previously Presented) The method of claim 19, further comprising the steps of: capturing a first of the at least two images using conventional photography; and capturing a second of the at least two images using infrared photography.

24. (Previously Presented) The method of claim 19, further comprising the step of varying the number of bits used by each pixel in the image sensor.

25. (Currently Amended) An image processing system, comprising:
an image storage device;
at least two similar images contained in the image storage device;
a processor coupled to the image storage device;
a code segment for processing the at least two similar images, where the at least two similar images are combined to form a new image having at least one characteristic different from corresponding characteristics of the at least two images, the at least one characteristic including at least one of lens tilt and lens shift characteristics, a lens shift referring to a physical shift of the lens in a vertical direction or a horizontal direction with respect to an image plane and a plane tilt referring to a physical tilt of the lens with respect to the image plane, wherein the code segment simulates at least one of the lens shift and plane tilt characteristics in the new image from the at least two images captured at a plurality of focal lengths; and
an output element for rendering the new image.

26. (Original) The system of claim 25, wherein the image processing system is contained within an image capture device such that the at least two similar images are captured by the image capture device and placed in the image storage device.

27. (Original) The system of claim 26, where the image processing system instructs the image capture device to vary at least one parameter of the image capture device so that the at least two similar images differ due to the variance of the at least one parameter.

28. (Original) The system of claim 26, wherein the image storage device for one of the at least two similar images is the image sensor of the image capture device.

29. (Previously Presented) The system of claim 25, wherein the at least one characteristic includes different depth of field.

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30. (Previously Presented) The system of claim 25, wherein the at least one characteristic includes different exposure.

31. (Previously Presented) The system of claim 27, wherein the at least one parameter includes image illumination.

32. (Original) The system of claim 25, wherein the at least two similar images differ primarily in focus.

33. (Currently Amended) The system of claim 25, where the at least two similar images differ primarily in color.

34. (Original) The system of claim 25, wherein a first of the at least two similar images is captured using visible light and the second of the at least two similar images is captured using infrared exposure.